

### AMENDMENTS TO CLAIMS

This listing of claims replaces all previous listings of claims for this application:

- 1-19. Canceled
20. (Currently Amended) A device comprising a surface with enhanced cell-adhesive properties, said surface comprising:
- a) a polymeric matrix;
  - b) at least one oxygen-sensing compound; ~~and~~
  - c) ~~at least one cell-adhesive molecule coupled to~~ a non-mechanical self-assembled monolayer ~~via~~ comprising at least one reactive group; ~~[[.]] and~~
  - d) at least one cell-adhesive molecule coupled to said non-mechanical self-assembled monolayer ~~comprising via~~ at least one reactive group.
21. (New) The device of claim 20, wherein said at least one reactive group comprises a reactive group selected from the group consisting of: a carboxyl group, a hydroxyl group, an amide, an amino, an acyl group, an ester, an epoxy, a silane, a silanol, an aldehyde, and a sulfhydryl group
22. (New) The device of claim 21, wherein said reactive group is a hydroxyl group.
23. (New) The device of claim 20, wherein said polymeric matrix comprises silicone.
24. (New) The device of claim 23, wherein said silicone is polydimethyl siloxane (PDMS).
25. (New) The device of claim 20, wherein said oxygen-sensing compound is luminescent.
26. (New) The device of claim 20, wherein said at least one cell-adhesive molecule is selected from the group consisting of: a protein, a protein fragment, a polypeptide, an oligopeptide, an amino acid, a proteoglycan, a glycoprotein, a lipoprotein, a

carbohydrate, a disaccharide, a polysaccharide, a nucleic acid, an oligonucleotide, a polynucleotide, a synthetic polymer, a natural polymer and combinations thereof.

27. (New) The device of claim 20, wherein said at least one cell-adhesive molecule is selected from the group consisting of an extracellular matrix molecule, a growth factor, and an antibody.